

FE 103

Diagrams 1218-2 & 1219-2

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT (HYDROGRAPHIC)

Type of Survey ... Field Examination
Field No. BOW-H-1151
Office No..... FE-103

LOCALITY

State Delaware
General Locality ... Cape Henlopen
Locality Delaware Breakwater Harbor

19 51

CHIEF OF PARTY

W.F. Malnate by E.H. Sheridan

LIBRARY & ARCHIVES

DATE December 6, 1951

☆ U.S. GOV. PRINTING OFFICE: 1976-669-441

NOTE: A new system for registering Field Examinations (FE's) was established in 1980. All FE's are now consecutively numbered as shown hereon. The date shown in the new format is the actual date of survey. This material was previously registered as; FE No.12 1951

FE No. 12
1951

FE-103

Diag. Cht. No. 1218-2 & 1219-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHY

Field No. BOW-H-1151 Office No. FE. NO. 12(1951)

LOCALITY

State Delaware

General locality Cape Henlopen

Locality Delaware Breakwater Harbor

194 51

CHIEF OF PARTY

W. F. Malnate by E. H. Sheridan

LIBRARY & ARCHIVES

DATE DEC 6 1951

B-1870-1 (1)

FE No. 12
1951

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEY H-
(Field Sheet No. BOW-H-1151)

Chief of Party

Ship BOWEN

W. F. Malnate by
E.H.Sheridan.

Surveyed on 13,14,& 15
October 1951.

Scale 1 : 10,000.

A. PROJECT:

This survey was executed in compliance with the Director's letters of 13 & 18 September 1951.

B. SURVEY LIMITS AND DATES:

This survey covers a small area of inshore hydrography in the vicinity of Cape Henlopen, Delaware as outlined on Chart No. 379 enclosed with the Director's letter of 13 September 1951. The survey was done on 13, 14 & 15 October 1951.

C. VESSELS, EQUIPMENT AND PERSONNEL:

Two U. S. Coast Guard 38 foot Picket Boats Nos. 38622 and 38635 from USCG Station at Lewes, Del. and portable recorders Nos. 116S and 117S were used. The assigned Coast Guard personnel manned the boats and the survey was accomplished by personnel from the Ship BOWEN.

D. TIDE STATIONS:

Predicted tides for Breakwater Harbor, Del. were used for the reduction of soundings as authorized in the Director's letter of 17 October 1951.

E. BOAT SHEET:

The boat sheet was constructed aboard the Ship BOWEN. Signals were plotted and verified in the usual manner.

F. CONTROL STATIONS:

Hydrography was controlled by four triangulation stations supplemented by one topographic station from

211/2

prior survey No. T-8499 and five hydrographic signals located by this hydrographic party.

Following is a list of signals used on this sheet.

<u>STATION</u>	<u>ORIGIN OF STATION</u>	<u>PARTY CHIEF</u>	<u>YEAR</u>
SKY	T-8499	T.B.R.	
TED	Hydrographic Signal	W.F.M.	1951
OBB	" "	"	"
LEG	" "	"	"
CON	" "	"	"
FOG	" "	"	"

TRIANGULATION STATIONS

DOT	Delaware Breakwater, West End light		1933
REN	Delaware Breakwater Lighthouse	G.C.M	1927
BOR	Harbor of Refuge Lighthouse	"	"
WER	Tower No. 7 (1941)	G.R.F.	1950

G. SHORELINE:

The low water line around Cape Henlopen was located by a series of three-point sextant fixes while the beach was traversed afoot at low water.

H. SOUNDINGS:

Soundings were obtained with Submarine Signal Co. type 808J depth recorder.

Standard procedure was used in obtaining bar checks in accordance with paragraph 557 of the Hydrographic Manual.

I. CONTROL OF HYDROGRAPHY:

Hydrography was controlled by the standard procedure of obtaining three-point sextant fixes on shore signals previously located.

J. ADEQUACY OF SURVEY:

This survey is a hydrographic investigation of a small area and is incomplete. It is believed that a com-

plete hydrographic survey is required in this locality. This survey indicates that shoals are encroaching from both sides of the entrance to Breakwater Harbor.

P. AIDS TO NAVIGATION:

Floating aids to navigation and landmarks for charts for this survey were reported to the Washington Office on 16 October 1951.

Respectfully submitted

Emmett H. Sheridan
Emmett H. Sheridan
LCDR USC&GS.

STATISTICS

HYDROGRAPHIC SURVEY (H-1151

Ship BOWEN
Cape Henlopen, Delaware

Vol.	Day Letter	Date 1951	No. Of Pos.	Stat. Mi. Std. Line	Vessel
1	a	13 Oct.	60	6.1	U.S.C.G. Picket Boat 38635
1	b	14 Oct.	105	15.4	U.S.C.G. Picket Boat 38622
1	c	15 Oct.	<u>82</u>	<u>10.6</u>	U.S.C.G.
		Totals	<u>247</u>	<u>32.1</u>	Picket Boat 38622

TOTALS FOR SHEET: 247 Positions
464.7 Stat. Mi. Stg. line
7.0 Sq. Stat. Mi.

SUMMARY OF ECHO CORRECTIONS

Sheet H-

(BOW - H - 1151)

Ship	Day Letter	Fath. No.	Initial Set (ft.)	Fath. Scale	From Depth to Depth (ft.)	Corr'n (ft.)
U.S.C.G. Picket Boat 38635	a	116-S	0.5	A	0-55	0.0
				B	35-40	- 0.2
					40.1-44	- 0.4
					44.1-55	- 0.6
					55.1-65	- 0.8
					65.1-95	- 0.6
US.C.G. Picket Boat 38622	b	117-S	1.0	A	0-18	+ 0.4
					18.1-28	+ 0.2
	c				28.1-55	0.0
				B	35-53.5	- 1.2
					53.6-82.0	- 1.0

TIDAL NOTE

(BOW - H - 1151)

The predicted tides from the tide Tables, EAST COAST, for the year 1951, for Delaware Breakwater Harbor were used in accordance with Directors Letter date 17 October, 1951.

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~

14 December 1951

Division of Charts: R. H. Carstens:

Plane of reference approved in
1 volume of sounding records for

~~HYDROGRAPHIC SHEET~~ FE No 12 1951

Locality Cape Henlopen, Delaware

Chief of Party: W.F. Malnate in 1951
Plane of reference is mean low water
ft. on tide staff at
ft. below B. M.

Condition of records satisfactory except as noted below:

NOTE: Tide reducers were verified by means of tide predictions at Breakwater Harbor, Delaware with no allowances for time and range at the working grounds.

E. C. McKay
Section

Chief, ~~Division of Tides and Currents.~~

GEOGRAPHIC NAMES

Survey No. **FE. No. 12 (1951)**

Name on Survey	<div>On Chart No.</div> <div>On previous survey No.</div> <div>On U. S. quadrangle Maps</div> <div>From local information</div> <div>On local Maps</div> <div>P. O. Guide or Map</div> <div>Rand McNally Atlas</div> <div>U. S. Light List</div>										
	A	B	C	D	E	F	G	H	K		
										1	
										2	
										3	
										4	
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										27	

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ~~FE~~ No. 12(1951)

Records accompanying survey:

Boat sheets 1; sounding vols. 1; wire drag vols.;
 bomb vols.; graphic recorder rolls 1 ^{Env};
 special reports, etc. 1 Descriptive Report.....

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	.....	247
Number of positions checked	.....	19
Number of positions revised	.....	0
Number of soundings revised (refers to depth only)	.....	4
Number of soundings erroneously spaced	.....	0
Number of signals erroneously plotted or transferred	.....	0
Topographic details	Time	..... 0
Junctions	Time	..... 0
Verification of soundings from graphic record	Time	..... 1
Verification by <i>Im Jeskind</i>	Total time	..... 14 Date 8-19-52
Reviewed by <i>Im Jeskind</i>	Time	..... 4 Date 8-20-52

REVIEW OF FIELD EXAMINATION NO. 12, 1951

This field examination was made in compliance with the Directors Letters of the 13 and 18 September 1951. The purpose of the examination was to investigate the report of the U. S. Coast Guard that Cape Henlopen had built out to the northward about 300 ft. The area to be surveyed was indicated on a section of chart 379.

A comparison between prior surveys H-7034 and H-7035 of 1945 and the field examination shows considerable inshore changes in bottom configuration. The north end of Cape Henlopen has moved out about 400 ft. and shoals are encroaching from both sides of the entrance to Breakwater Harbor. The bottom in the area covered by the field examination is constantly changing and a detailed comparison between the prior and present surveys would serve no useful purpose.

Critical information of the field examination was applied to chart 379 dated 3-17-52 prior to its verification and review. The charted information is correct.

The Descriptive Report adequately covers all other matters pertaining to this examination. No further discussion is considered necessary.

I. M. Zeskind
20 August 1952

Inspected by:

R. H. Carstens

73° 06'

05'

38° 48'

Delaware Breakwater
Lighthouse, 1927

BREAKWATER
HARBOR

TED

Breakers

OBB

HIGHWATER LINE
FROM CHART
NO. 379

CON

FOG

Black "C3"

Black Bell "1A"

NOTE:
Soundings in red are from Chart 379

F.E.No.12, 1951

Scale 1:10,000

Soundings in feet
at M.L.W

Try

NAUTICAL CHARTS BRANCH

SURVEY NO. FE. No. 12 (1951)

Record of Application to Charts

[illegible]

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.